

TITLE: Cloning of Novel Gene Sequences Expressed and Repressed
During Winter Dormancy in the Apical Buds of Tea

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Figure 1 represents Total RNA isolated from the non-dormant (ND) and dormant (D) buds of tea. M represents RNA marker.

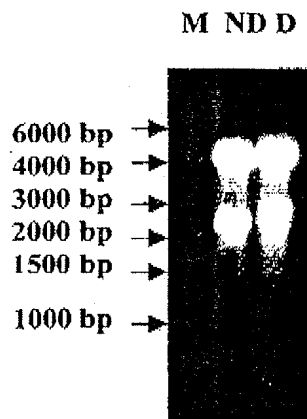


Figure 2 represents cDNA synthesized from the total RNA isolated from the ND and D buds of tea. T₁₁A, T₁₁C and T₁₁G represent the primers used for the purpose of cDNA synthesis using total RNA in three separate reactions. M lane contains DNA molecular weight marker.

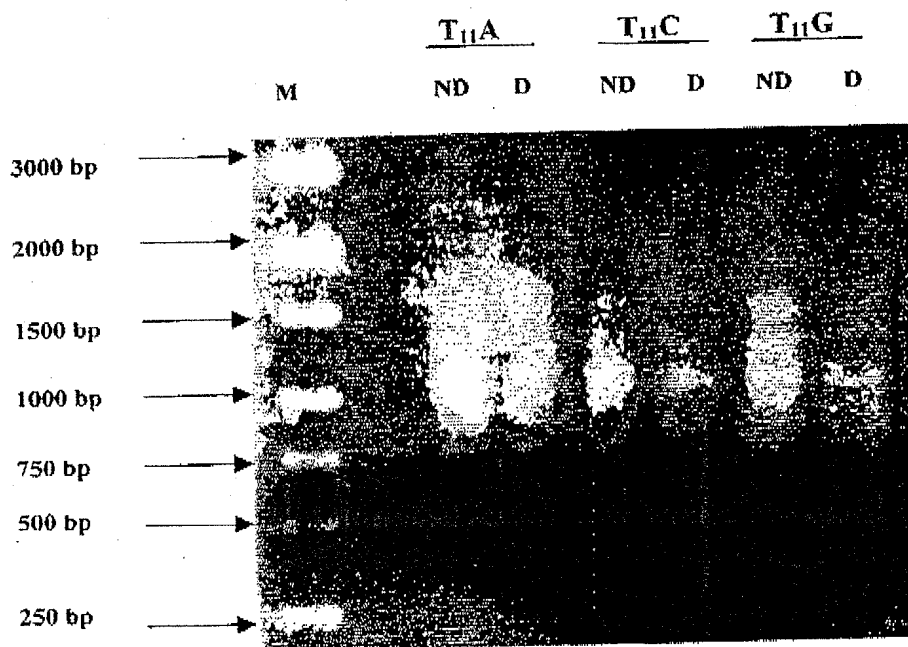


Figure 3 represents spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.

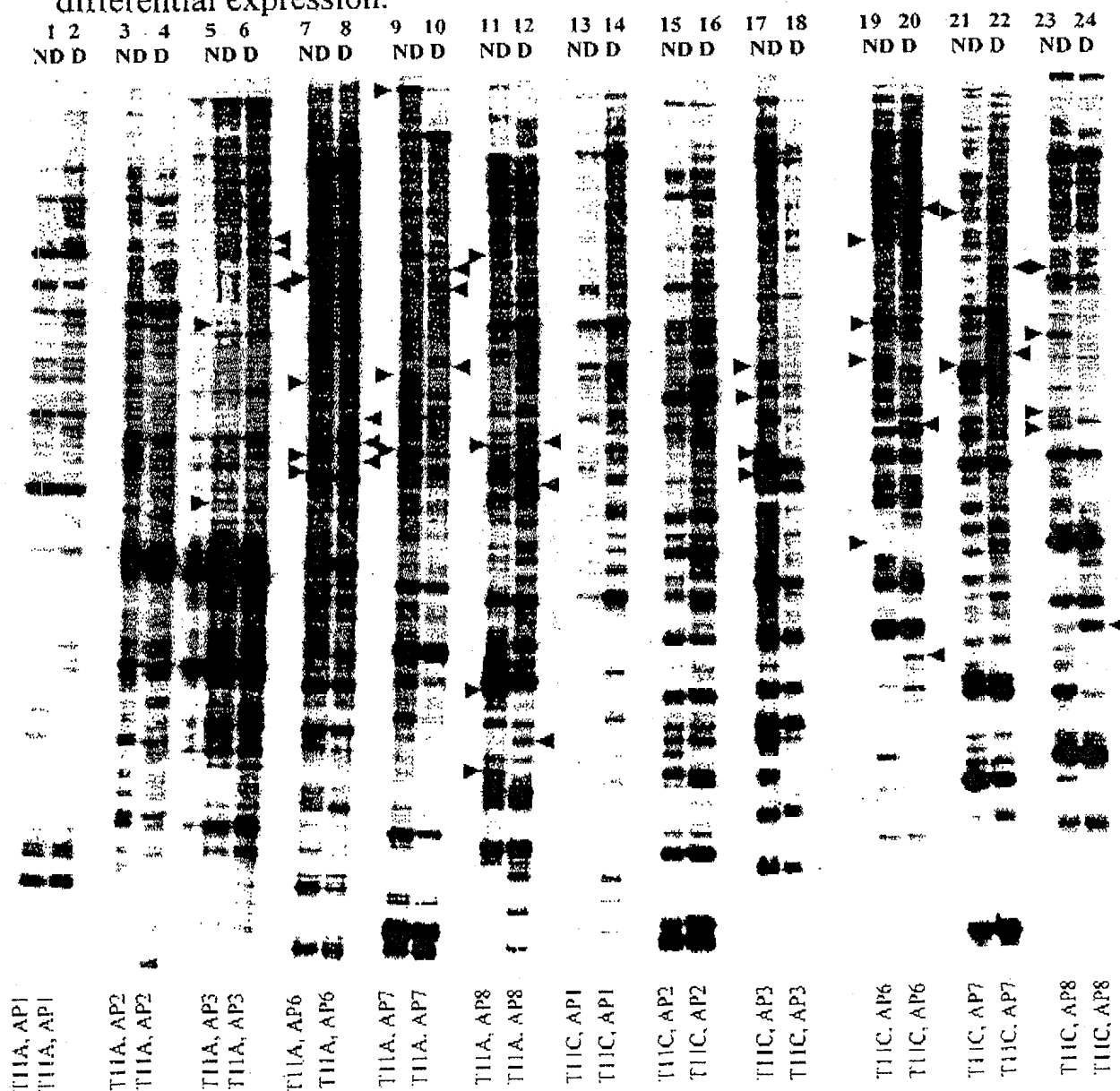


Figure 4 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.



Figure 5 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.

31 32 33 34 35 36
 ND D ND D ND D



TIIC, AP37
 TIIC, AP37
 TIIC, AP38
 TIIC, AP38
 TIIC, AP39
 TIIC, AP39

Figure 6 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.

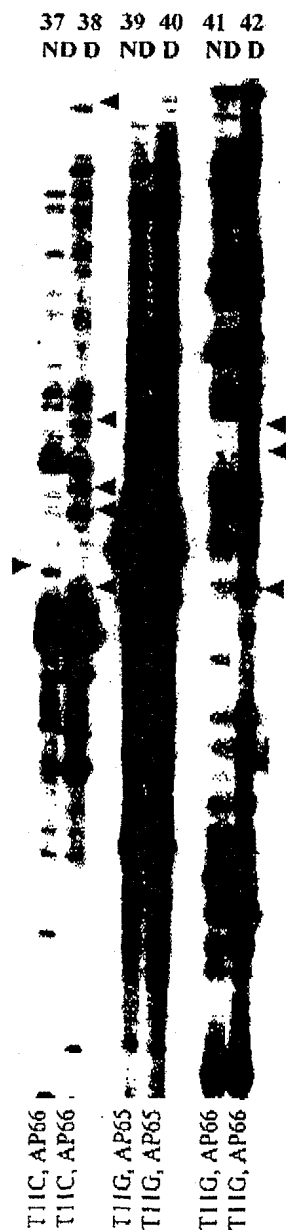


Figure 7 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.



Figure 8 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.

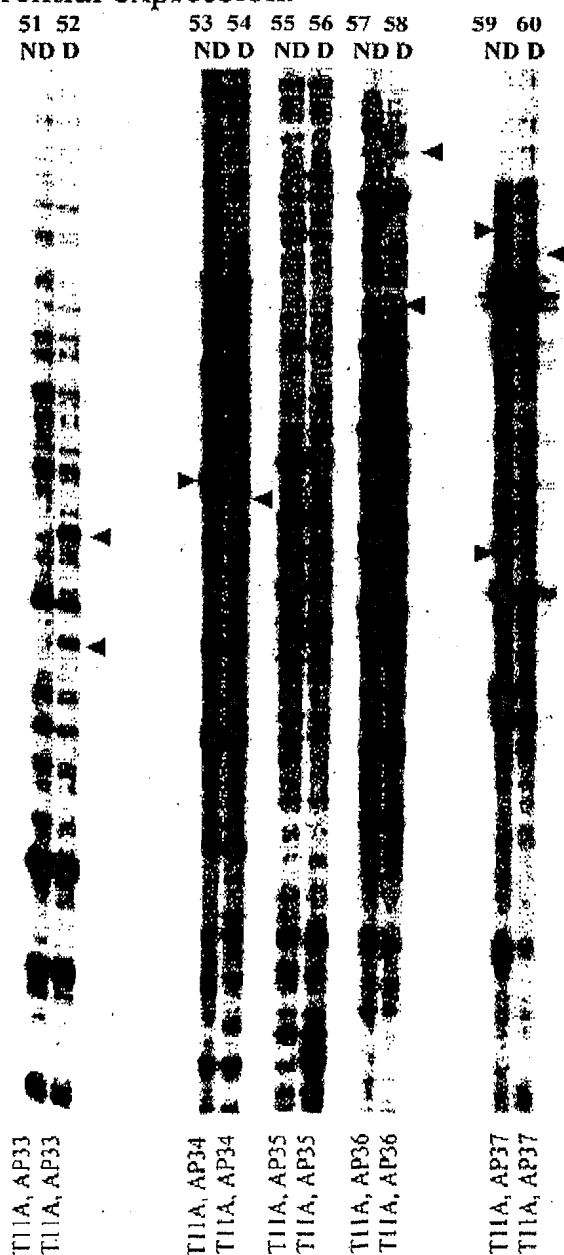


Figure 9 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.



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Figure 10 represents further spectrum of 3' ends of the expressed and repressed genes in ND and D apical buds of tea using the primer combinations as defined at the bottom of each lane. Numbers on the top of each lane represent lane number. Arrow indicates differential expression.

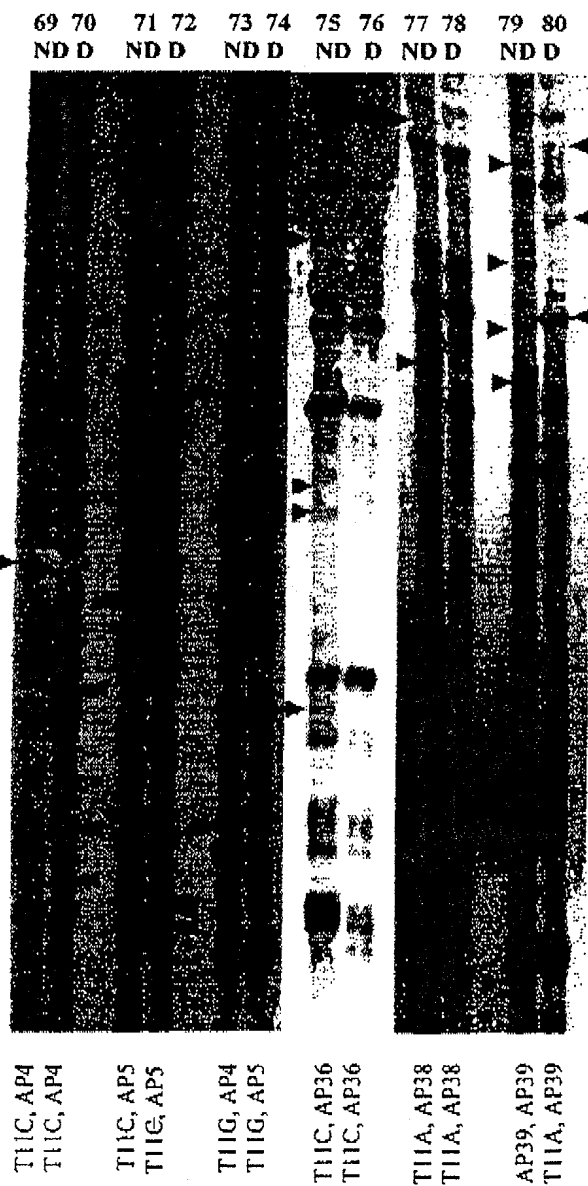
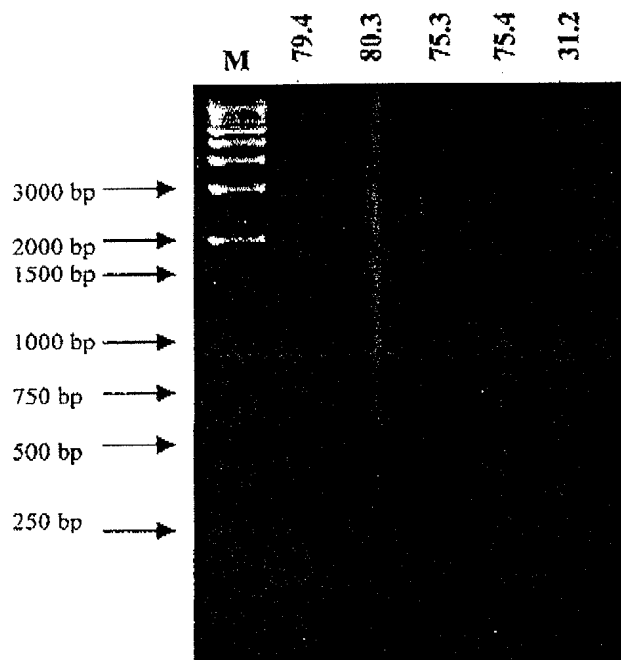
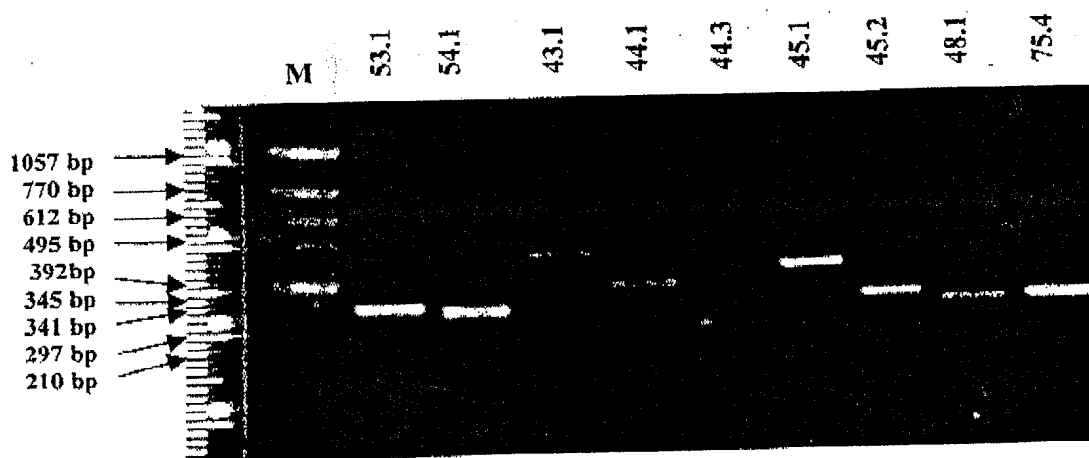


Figure 11 represents amplification of the differentially expressed 3' ends of the gene after eluting from the sequencing gel as shown in figure 6. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker.



31.2# T₁₁C AP37 cloned
 from ND

Figure 12 represents amplification of the differentially expressed 3' ends of the gene after eluting from the sequencing gels as shown in figures 8 and 9. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker



53.1# T11A AP34 from ND

44.3# T11G AP33 from D

Figure 13 represents amplification of the differentially expressed 3' ends of the gene after eluting from the sequencing gel as shown in figure 3. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker

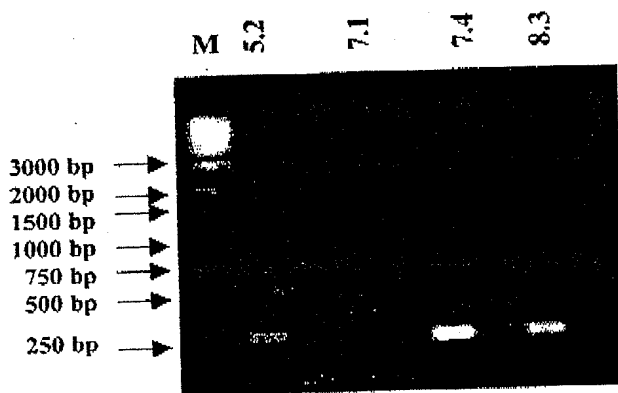


Figure 14 represents amplification of the differentially expressed 3' ends of the gene after eluting from the sequencing gel as shown in figure 3. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker.

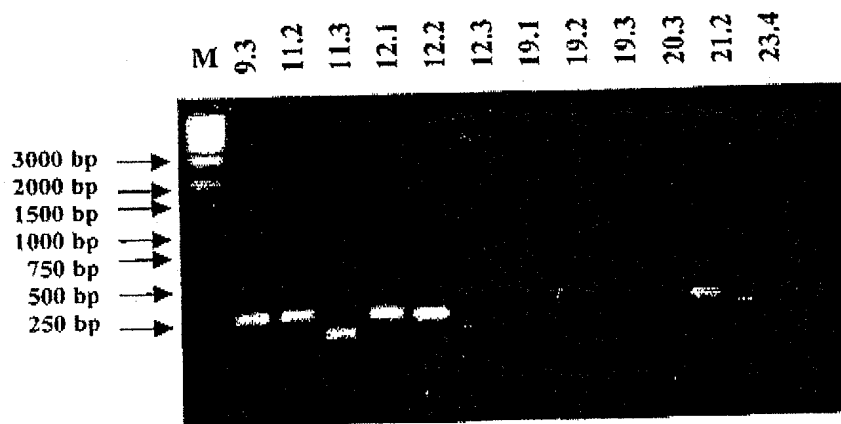
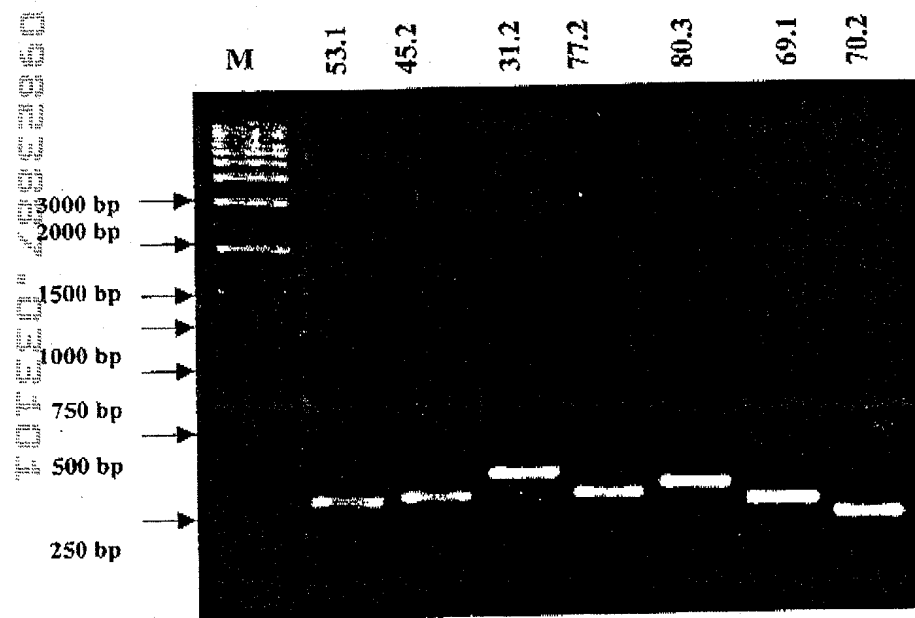
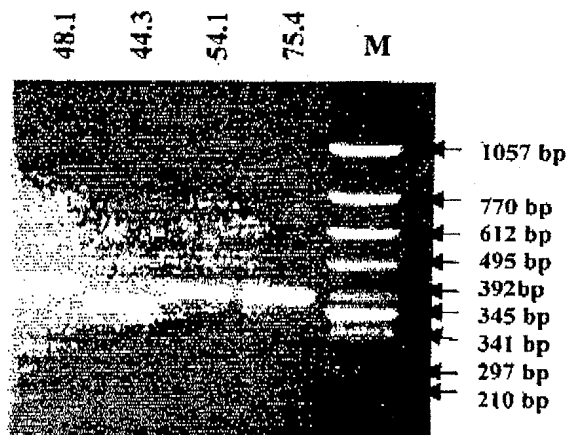


Figure 15 represents amplification after cloning of the eluted differentially expressed 3' ends of the gene as mentioned in Figures 11-14. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker.



53.1# T11A AP34
cloned from ND
31.2# T11C AP37
cloned from ND

Figure 16 represents amplification after cloning of the eluted differentially expressed 3' ends of the gene as mentioned in Figures 11-14. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker.



44.3# T11G AP33
cloned from D

Figure 17 represents amplification after cloning of the eluted differentially expressed 3' ends of the gene as mentioned in Figures 11-14. The first number at the top of each lane represents the lane number as mentioned in Figures 3-10. The second number followed by the dot represents the number of differentially expressed band as counted from the top of the respective lane as mentioned in figures 3-10. M represents DNA size marker.

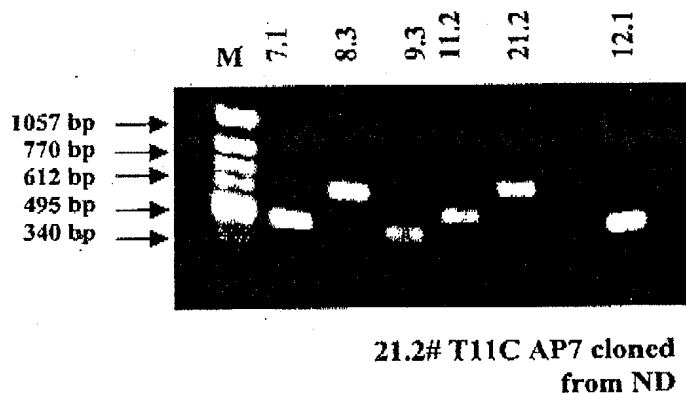


Figure 18 represents confirmation of differential expression of the cloned 3' ends of the gene through northern hybridization.

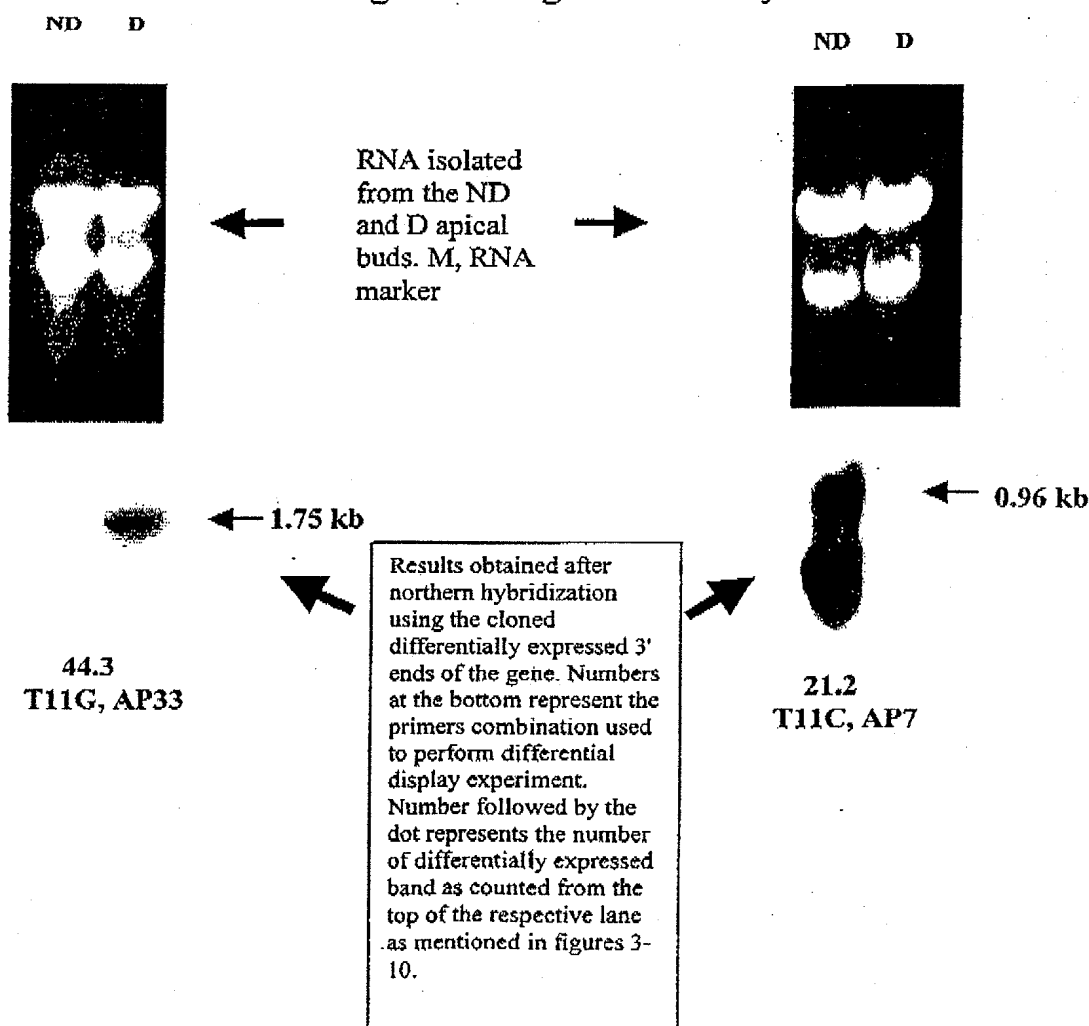


Figure 19 represents further confirmation of differential expression of the cloned 3' ends of the gene through northern hybridization using 2 more clones.

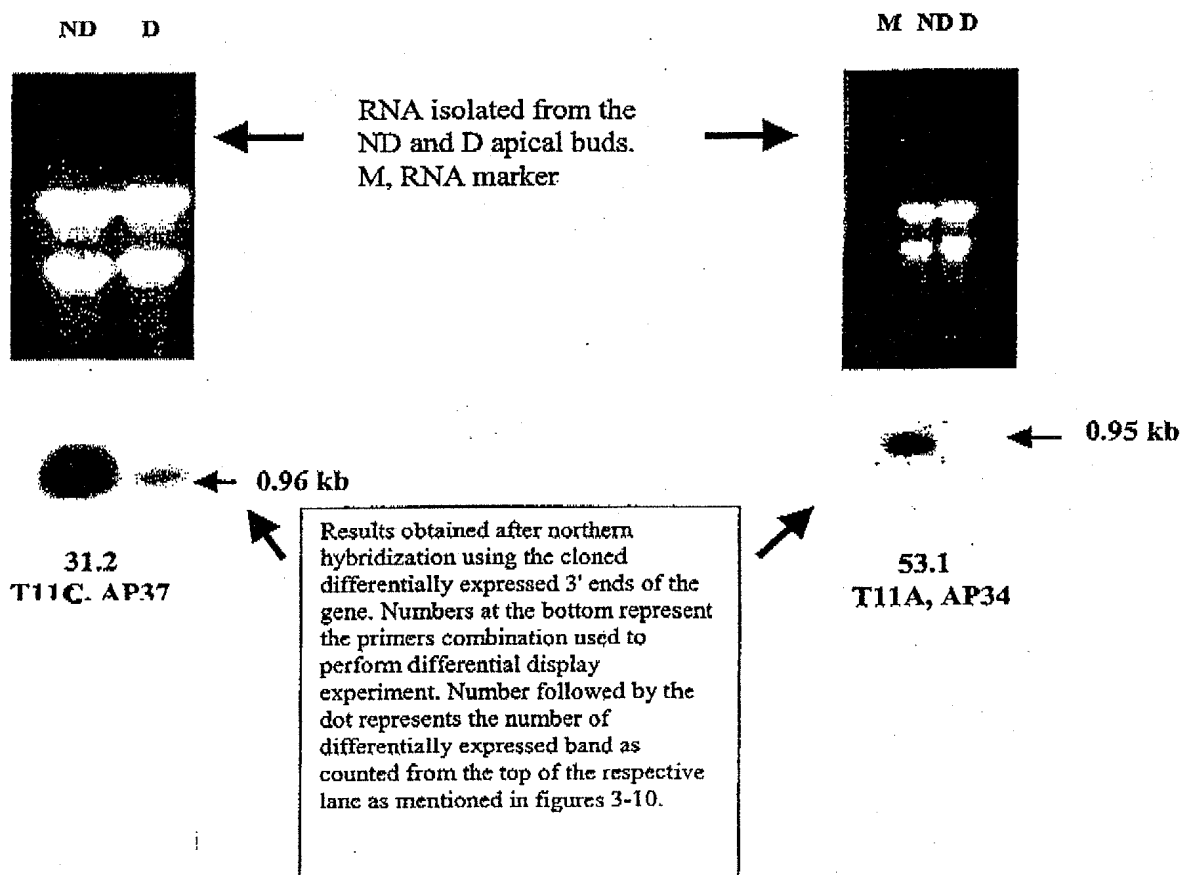


Figure 20 represents expression of the identified, cloned 3' ends of gene number 31.2 from ND apical buds in ND, D and forced ND apical buds (gibberellic acid, GA₃, was applied onto the D buds during winter season to force the buds to enter into non-dormancy stage; it has been marked with GA₃ in the panel).

